



Mineral Industry Surveys

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CHROMIUM IN APRIL 2007

On the basis of gross weight, consumption of chromium ferroalloys and metal in April 2007 increased slightly compared with consumption in March 2007, according to the U.S. Geological Survey.

Included in this Mineral Industry Surveys are U.S. salient chromium statistics, U.S. Government stockpile inventory of

chromium materials in April 2007, consumption by end use and consumer stocks of chromium ferroalloys and metal at the end of April 2007, and U.S. foreign trade data for selected chromium-containing materials in March 2007.

TABLE 1
U.S. SALIENT CHROMIUM STATISTICS¹

(Metric tons, gross weight)

	2006	2007			
	January- December ²	February	March	April	January- April ²
Production:					
Stainless steel production ³	2,460,000	185,000	216,000	199,000	819,000 ⁴
Components of U.S. supply:					
Stainless steel scrap receipts	1,050,000	81,600	89,800	78,200	350,000
Stainless steel scrap consumption	1,500,000	122,000	132,000	115,000	509,000
Imports for consumption:					
Chromite ore	150,000	1,840	7,370	3,790	49,400
Ferrochromium:					
More than 4% carbon	393,000	49,100	21,500	36,000	137,000
More than 0.5%, but not more than 3% carbon	29	1,300	1,300	600	4,500
Not more than 0.5% carbon	28,100	1,910	4,970	2,680	11,800
Ferrochromium silicon	38,300	1,890	4,940	5,690	13,300
Total ferroalloy imports	459,000	54,200	32,700	44,900	166,000
Chromium metal ⁵	10,900	644	928	1,240	3,470
Stainless steel	872,000	66,400	72,500	69,200	284,000
Stainless steel scrap	180,000	8,990	14,500	12,000	45,200
Distribution of U.S. supply:					
Consumption, industry, chromium ferroalloys and metal	553,000 ^r	35,300	37,300	37,700	148,000
Exports:					
Chromite ore	53,900	821	899	12,000	14,200
Chromium ferroalloys:					
High-carbon ferrochromium	18,800	11,400	1,120	1,340	16,000
Low-carbon ferrochromium	16,600	4,900	168	395	8,740
Ferrochromium silicon	248	--	32	82	114
Total ferroalloy exports	35,700	16,300	1,320	1,820	24,900
Chromium metal	1,020	115	80	140	442
Stainless steel	410,000	38,500	47,100	44,800	165,000
Stainless steel scrap	506,000 ^r	79,200	84,400	58,000	281,000
Stocks at end of period:					
Consumer, industry, chromium ferroalloys and metal	XX	12,200	11,900	11,700	XX
Government stockpile:					
Chromium ferroalloys	XX	323,000	303,000	286,000	XX
Chromium metal	XX	5,280	5,280	5,280	XX

^rRevised. XX Not applicable. -- Zero.

¹Data has been rounded to three significant figures; may not add to totals shown.

²May include revised data.

³Data on stainless steel production reported by American Iron and Steel Institute; monthly, quarterly, and year-to-date production of stainless and heat-resisting raw steel.

⁴Includes revised data that is not broken out by specific month.

⁵Includes waste and scrap and other.

TABLE 2
U.S. REPORTED CONSUMPTION AND STOCKS OF CHROMIUM PRODUCTS IN 2007^{1, 2}

(Metric tons, gross weight unless otherwise noted)

	March	April	January- April ³
Consumption by end use:			
Alloy uses:			
Iron alloys:			
Steel:			
Carbon steel	347	314	1,230
High-strength low-alloy steel	483	421	1,840
Stainless and heat-resisting steel	33,200	33,000	131,000
Full alloy steel	1,250	1,830	5,810
Electrical steel	W	W	W
Tool steel	450	426	1,750
Unspecified steel	W	W	W
Cast irons	W	W	W
Super alloys	621	744	2,850
Other alloys ⁴	33	34	134
Total	37,300	37,700	148,000
Total, chromium content	22,000	22,000	86,900
Consumption by material:			
Low-carbon ferrochromium	2,020	2,070	8,030
High-carbon ferrochromium	31,800	32,100	126,000
Ferrochromium silicon	3,110	3,110	12,400
Chromium metal	335	375	1,470
Chromite ore	W	W	W
Chromium-aluminum alloy	24	24	91
Other chromium materials	W	W	W
Total	37,300	37,700	148,000
Total, chromium content	22,000	22,000	86,900
Consumer stocks:			
Low-carbon ferrochromium	1,910	1,870	XX
High-carbon ferrochromium	8,460	8,400	XX
Ferrochromium silicon	1,340	1,180	XX
Chromium metal	194	153	XX
Chromite ore	7	18	XX
Chromium-aluminum alloy	24	18	XX
Other chromium materials	18	13	XX
Total	11,900	11,700	XX
Total, chromium content	7,010	6,870	XX

W Withheld to avoid disclosing company proprietary data; included in "Total." XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes estimates.

³May include revised data.

⁴Includes welding and alloy hard-facing rods and materials; wear- and corrosion-resistant alloys; and aluminum, copper, magnetic, nickel, and other alloys.

TABLE 3
U.S. GOVERNMENT STOCKPILE INVENTORY OF
CHROMIUM MATERIALS^{1, 2}
(Metric tons)

Period	Chromium ferroalloys		Chromium metal
	High-carbon ferro-chromium	Low-carbon ferro-chromium	
2006:			
April	275,000	145,000	5,590
May	271,000	139,000	5,280
June	270,000	139,000	5,280
July	270,000	137,000	5,280
August	267,000	137,000	5,280
September	265,000	135,000	5,280
October	263,000	133,000	5,280
November	255,000	132,000	5,280
December	229,000	118,000	5,280
2007:			
January	223,000	111,000	5,280
February	215,000	108,000	5,280
March	204,000	98,900	5,280
April	191,000	94,900	5,280

¹Data are rounded to no more than three significant digits.

²These Government stocks are reported by the Defense National Stockpile Center in Inventory of Stockpile Materials R-1, which reports uncommitted inventory. Uncommitted inventory is that inventory for which there is no sales contract. Committed inventory is that inventory for which there is a sales contract, however, the material has not yet been shipped. For chromium materials, the R-1 report includes chromium materials that (1) meet specifications and are held in excess of goal and (2) do not meet specifications and are held in excess of goal. The R-1 report excludes chromium materials that are committed and awaiting shipment.

Source: Defense National Stockpile Center.

TABLE 4
U.S. EXPORTS OF CHROMITE ORE, CHROMIUM FERROALLOYS, AND METAL¹

Period	Chromite ore		Chromium ferroalloys ²			Chromium metal ³	
	Gross weight (metric tons)	Value (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value (thousands)	Gross weight (metric tons)	Value (thousands)
2006:							
March	618	\$285	733	447	\$936	140	\$2,350
April	331	163	708	403	982	43	1,370
May	1,080	277	1,710	937	1,670	58	1,440
June	8,160	825	6,300	3,750	5,660	66	1,380
July	8,780	725	8,570	5,170	7,060	95	1,800
August	6,940	5,550	2,380	1,410	3,000	109	2,270
September	2,280	309	1,440	801	2,060	109	1,910
October	445	157	2,050	1,240	2,360	95	1,830
November	22,700	1,240	2,560	1,610	3,650	85	1,720
December	286	116	7,380	4,410	8,550	62	1,490
January-December	53,900	10,200	35,700	21,300	38,100	1,020	21,300
2007:							
January	455	185	5,410	3,330	6,050	107	1,990
February	821	361	16,300	11,100	15,500	115	1,600
March	899	368	1,320	745	1,620	80	1,600
January-March	2,180	914	23,100	15,200	23,100	302	5,190

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes low-, medium-, and high-carbon ferrochromium and ferrochromium silicon.

³Includes chromium metal waste and scrap and unwrought powders.

Source: U.S. Census Bureau.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF CHROMITE ORE, FERROCHROMIUM, AND CHROMIUM METAL¹

(Metric tons)

	2006	2007		
	January-December ²	February	March	January-March
Chromite ore:				
Not more than 40%:				
Gross weight	117	--	--	--
Chromic oxide content	45	--	--	--
More than 40% but less than 46% chromic oxide:				
Gross weight	3,810	1,620	73	25,800
Chromic oxide content	1,750	744	34	11,900
46% or more chromic oxide:				
Gross weight	146,000	224	7,300	19,800
Chromic oxide content	76,300	106	3,410	9,210
Total, all grades:				
Gross weight	150,000	1,840	7,370	45,600
Chromic oxide content	78,100	850	3,440	21,100
Ferrochromium:				
Low-carbon: ³				
Not more than 0.5%:				
Gross weight	28,100	1,910	4,970	9,150
Chromium content	19,300	1,300	3,410	6,230
More than 0.5% but not more than 3%:				
Gross weight	29	1,300	1,300	3,900
Chromium content	23	714	715	2,120
Total, low-carbon:				
Gross weight	28,100	3,210	6,270	13,100
Chromium content	19,300	2,010	4,130	8,350
High-carbon: ⁴				
Gross weight	393,000	49,100	21,500	101,000
Chromium content	230,000	25,400	13,700	59,100
Total, all grades:				
Gross weight	421,000	52,300	27,800	114,000
Chromium content	249,000	27,400	17,900	67,500
Chromium metal:				
Unwrought powders	1,250	72	96	328
Waste and scrap	90	--	1	2
Other than waste and scrap and unwrought powders	9,540	571	831	1,890
Total, all grades	10,900	643	928	2,230

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include revised data.

³Ferrochromium containing not more than 3% carbon.

⁴Ferrochromium containing more than 4% carbon.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2007,
BY GRADE AND BY COUNTRY¹

Grade and country	March			January-March ²		
	Gross weight (metric tons)	Chromium content (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value ³ (thousands)
High-carbon ferrochromium:⁴						
India	--	--	--	55	36	\$27
Kazakhstan	13,100	9,130	\$13,500	35,700	25,200	34,900
Russia	3,520	2,200	2,920	8,000	5,050	6,520
South Africa	4,900	2,410	2,680	47,400	23,600	27,900
Switzerland	--	--	--	3,500	1,680	2,130
Zimbabwe	--	--	--	6,050	3,630	5,580
Total	21,500	13,700	19,100	101,000	59,100	77,000
Low-carbon ferrochromium:⁵						
Not more than 0.5% carbon:						
Brazil	--	--	--	2	1	6
China	19	12	41	139	91	290
Germany	750	527	1,880	1,530	1,070	3,540
Japan	718	481	1,360	1,120	754	2,340
Kazakhstan	700	489	1,250	1,500	1,050	2,500
Russia	2,790	1,910	4,540	4,580	3,100	7,290
South Africa	--	--	--	262	146	231
Sweden	--	--	--	19	14	69
Total	4,970	3,410	9,070	9,150	6,230	16,300
More than 0.5% but not more than 3%:						
Kazakhstan	--	--	--	--	--	--
South Africa, Republic of	1,300	715	1,340	3,900	2,120	3,860
Total	1,300	715	1,340	3,900	2,120	3,860
All grades:						
Brazil	--	--	--	2	1	6
China	19	12	41	139	91	290
Germany	750	527	1,880	1,530	1,070	3,540
India	--	--	--	55	36	27
Japan	718	481	1,360	1,120	754	2,340
Kazakhstan	13,800	9,620	14,800	37,200	26,200	37,400
Russia	6,310	4,110	7,460	12,600	8,150	13,800
South Africa	6,200	3,120	4,020	51,600	25,800	32,000
Sweden	--	--	--	19	14	69
Switzerland	--	--	--	3,500	1,680	2,130
Zimbabwe	--	--	--	6,050	3,630	5,580
Total	27,800	17,900	29,500	114,000	67,500	97,200

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include revised data.

³Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

⁴Ferrochromium containing more than 4% carbon.

⁵Ferrochromium containing not more than 3% carbon.

Source: U.S. Census Bureau.

TABLE 7
U.S. IMPORTS FOR CONSUMPTION OF CHROMIUM METAL IN 2007,
BY GRADE AND BY COUNTRY¹

Grade and country	March		January-March ²	
	Gross weight (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Value ³ (thousands)
Unwrought powders:				
China	--	--	20	\$251
France	--	--	3	20
Germany	--	--	12	71
Japan	4	\$147	11	398
Russia	41	243	150	1,340
United Kingdom	51	376	132	1,030
Total	96	766	328	3,110
Waste and scrap:				
Japan	(4)	9	(4)	9
Korea, Republic of	(4)	8	(4)	8
Taiwan	--	--	2	28
Total	1	17	2	45
Other than waste and scrap and unwrought powders:				
China	193	1,340	564	4,620
France	285	2,510	590	5,140
Germany	6	60	10	239
Italy	(4)	3	(4)	3
Japan	--	--	(4)	12
Russia	216	1,310	473	3,380
United Kingdom	132	989	258	2,010
Total	831	6,210	1,890	15,400
All grades:				
China	193	1,340	584	4,870
France	285	2,510	593	5,160
Germany	6	60	22	310
Italy	(4)	3	(4)	3
Japan	4	156	11	419
Korea, Republic of	(4)	8	(4)	8
Russia	257	1,560	623	4,720
Taiwan	--	--	2	28
United Kingdom	183	1,370	389	3,040
Total	928	7,000	2,230	18,600

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include revised data.

³Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

⁴Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8
U.S. TRADE OF STAINLESS STEEL, BY PRODUCT, IN 2007¹

Stainless steel product	March		January-March	
	Gross weight (metric tons)	Value ² (thousands)	Gross weight (metric tons)	Value ² (thousands)
Exports:				
Ingot	1,500	\$10,200	3,630	\$23,700
Flat-rolled (width > 600 mm)	27,000	88,600	64,900	208,000
Flat-rolled (width < 600 mm)	10,200	49,900	28,000	142,000
Bars and rods in irregular coils	1,060	4,630	2,470	11,800
Other bars and rods	3,530	25,100	9,090	63,700
Wire	677	5,220	1,940	13,600
Tubes, pipes, hollow profiles	3,260	23,300	10,600	77,500
Total	47,100	207,000	121,000	541,000
Stainless steel scrap	84,400	215,000	223,000	519,000
Grand total	132,000	422,000	343,000	1,060,000
Imports:				
Ingot	13,800	61,700	34,000	149,000
Flat-rolled (width > 600 mm)	27,300	114,000	88,100	344,000
Flat-rolled (width < 600 mm)	4,010	22,500	11,800	62,400
Bars and rods in irregular coils	2,880	14,000	8,030	36,800
Other bars and rods	9,440	48,300	27,600	138,000
Wire	3,760	23,300	10,800	62,500
Tubes, pipes, hollow profiles	11,300	88,700	34,400	246,000
Total	72,500	373,000	215,000	1,040,000
Stainless steel scrap	14,500	16,300	33,200	40,700
Grand total	87,000	389,000	248,000	1,080,000

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Export value is free alongside ship (f.a.s.). Import value is Customs import value, which generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

Source: U.S. Census Bureau.